

Arecibo Area, Puerto Rico Northern Part: Detailed Soil Map Legend

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Construction Materials and Excavating

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
AaC: Aceitunas-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited) ~slope (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
AcC: Aceitunas-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited) ~slope (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
AdF2: Adjuntas-----	Very limited ~slope (very limited) ~low strength (very limited) ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~too clayey (very limited)	Very limited ~slope (very limited) ~soft bedrock <40" (limited) ~too clayey (moderately limited)
AgC: Algarrobo-----	Very limited ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too sandy (very limited) ~dense layer (limited) ~too acid (limited)	Very limited ~cutbanks cave (very limited) ~dense layer (limited) ~too clayey (moderately limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
AlB:					
Almirante-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited)
AlC:					
Almirante-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited) ~slope (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
AmB:					
Almirante-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited)
AmC:					
Almirante-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited) ~slope (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
AnB:					
Almirante-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
AnC:					
Almirante-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited) ~slope (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
AoD2:					
Alonso-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~slope (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~slope (very limited) ~too acid (slightly limited)	Very limited ~too clayey (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)
AoE2:					
Alonso-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~slope (very limited) ~too clayey (very limited) ~cutbanks cave (slightly limited)
AoF2:					
Alonso-----	Very limited ~slope (very limited) ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~slope (very limited) ~too clayey (very limited) ~cutbanks cave (slightly limited)
ArC:					
Arecibo-----	Not limited	Probable source ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too sandy (very limited) ~too acid (limited)	Very limited ~cutbanks cave (very limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
Ba: Bajura-----	Very limited ~shrink-swell (very limited) ~low strength (very limited) ~wetness (limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~wetness (limited)	Very limited ~wetness (very limited) ~too clayey (limited) ~flooding (moderately limited)
BcB: Bayamon-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited)
BcC: Bayamon-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~slope (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
BsB: Bayamon-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited)
BsC: Bayamon-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~slope (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
ByB: Bayamon-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited)
ByC: Bayamon-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~slope (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
CaF: Caguabo-----	Very limited ~depth to bedrock (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~small stones (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)
CbF: Caguabo-----	Very limited ~depth to bedrock (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~small stones (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)
Rock outcrop-----	Not rated	Not rated	Not rated	Not rated	Not rated

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
CcD: Caracoles-----	Very limited ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (limited) ~too sandy (slightly limited)	Very limited ~hard bedrock <40" (very limited) ~slope (limited) ~cutbanks cave (slightly limited)
CcE: Caracoles-----	Very limited ~depth to bedrock (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~too sandy (slightly limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)
CeC: Carrizales-----	Not limited	Probable source	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too sandy (very limited) ~too acid (slightly limited)	Very limited ~cutbanks cave (very limited)
Cf: Catano-----	Not limited	Probable source	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too sandy (very limited) ~excess lime (limited)	Very limited ~cutbanks cave (very limited)
Cg: Coastal beaches-----	Not rated	Not rated	Not rated	Not rated	Not rated

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
C1D2: Colinas-----	Very limited ~depth to bedrock (very limited) ~low strength (very limited) ~slope (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~excess lime (very limited) ~slope (very limited)	Very limited ~slope (very limited) ~soft bedrock <40" (limited) ~cutbanks cave (slightly limited)
C1E2: Colinas-----	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~excess lime (very limited) ~slope (very limited)	Very limited ~slope (very limited) ~soft bedrock <40" (limited) ~cutbanks cave (slightly limited)
C1F2: Colinas-----	Very limited ~slope (very limited) ~depth to bedrock (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~excess lime (very limited) ~slope (very limited)	Very limited ~slope (very limited) ~soft bedrock <40" (limited) ~cutbanks cave (slightly limited)
CmF2: Colinas-----	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~excess lime (very limited) ~slope (very limited)	Very limited ~slope (very limited) ~soft bedrock <40" (limited) ~cutbanks cave (slightly limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
Cn: Coloso-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited)	Limited ~wetness (limited) ~flooding (moderately limited) ~too clayey (moderately limited)
CoE: Consejo-----	Very limited ~slope (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
CoF: Consejo-----	Very limited ~slope (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
CpE: Consumo-----	Very limited ~low strength (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (limited) ~too acid (moderately limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
CpF: Consumo-----	Very limited ~slope (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (limited) ~too acid (moderately limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
CrC: Corozal-----	Very limited ~low strength (very limited) ~wetness (very limited) ~shrink-swell (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~wetness (very limited) ~too acid (moderately limited)	Very limited ~wetness (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
CsC: Corozo-----	Not limited	Probable source ~possible source (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too sandy (very limited) ~dense layer (limited) ~too acid (limited)	Very limited ~cutbanks cave (very limited) ~dense layer (limited) ~too clayey (moderately limited)
CtB: Coto-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited)
CtC: Coto-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~slope (slightly limited)	Very limited ~too clayey (very limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
CuF: Cuchillas-----	Very limited ~slope (very limited) ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~too clayey (limited)	Very limited ~slope (very limited) ~soft bedrock <40" (limited) ~cutbanks cave (slightly limited)
CvF: Cuchillas-----	Very limited ~slope (very limited) ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~too clayey (limited)	Very limited ~slope (very limited) ~soft bedrock <40" (limited) ~cutbanks cave (slightly limited)
Rock outcrop-----	Not rated	Not rated	Not rated	Not rated	Not rated
DaD2: Daguey-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited) ~slope (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~slope (very limited) ~too acid (slightly limited)	Very limited ~too clayey (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)
EaB: Espinosa-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
EaC: Espinosa-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~slope (slightly limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
EbB: Espinosa-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited)
EbC: Espinosa-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~slope (slightly limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
EcB: Espinosa-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited)
EcC: Espinosa-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~slope (slightly limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
Es: Estacion-----	Not limited	Probable source ~excess fines (thickest layer)	Limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~too sandy (very limited) ~small stones (very limited) ~area reclaim (very limited)	Very limited ~cutbanks cave (very limited) ~flooding (moderately limited) ~too clayey (slightly limited)
Ga: Garrochales-----	Limited ~wetness (limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Limited ~wetness (limited)	Very limited ~wetness (very limited) ~flooding (moderately limited) ~cutbanks cave (slightly limited)
GeC: Guerrero-----	Limited ~low strength (limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too sandy (moderately limited) ~too acid (slightly limited)	Very limited ~cutbanks cave (very limited) ~too clayey (limited)
HD: Hydraquents-----	Limited ~wetness (limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~excess salts (very limited) ~wetness (limited)	Very limited ~wetness (very limited) ~flooding (moderately limited)
HmE: Humatas-----	Very limited ~low strength (very limited) ~slope (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~slope (very limited) ~too clayey (very limited) ~cutbanks cave (slightly limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
HmF: Humatas-----	Very limited ~slope (very limited) ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~slope (very limited) ~too clayey (very limited) ~cutbanks cave (slightly limited)
HS: Hydraquents-----	Very limited ~wetness (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~wetness (very limited) ~excess salts (very limited)	Very limited ~ponded (wetness) (very limited) ~wetness (very limited) ~flooding (moderately limited)
InD: Ingenio-----	Very limited ~low strength (very limited) ~shrink-swell (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~slope (limited) ~too acid (moderately limited)	Limited ~slope (limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)
InE: Ingenio-----	Very limited ~low strength (very limited) ~slope (very limited) ~shrink-swell (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (moderately limited)	Very limited ~slope (very limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)

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Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
IsC: Islote-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~depth to bedrock (very limited)	Limited ~too clayey (limited) ~soft bedrock <40" (moderately limited) ~cutbanks cave (slightly limited)
Ja: Jareales-----	Limited ~wetness (limited) ~shrink-swell (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~wetness (limited)	Very limited ~wetness (very limited) ~flooding (moderately limited) ~too clayey (moderately limited)
JoC: Jobos-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited)
JuD2: Juncal-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~slope (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~slope (very limited)	Very limited ~slope (very limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)
JuE2: Juncal-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited)	Very limited ~slope (very limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
LcE2: Lirios-----	Very limited ~low strength (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
LcF2: Lirios-----	Very limited ~slope (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (slightly limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
LDF: Landfill-----	Not rated	Not rated	Not rated	Not rated	Not rated
LgD: Los guineos-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited) ~slope (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~slope (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
LgE: Los guineos-----	Very limited ~low strength (very limited) ~slope (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
LgF: Los guineos-----	Very limited ~slope (very limited) ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
LME: Los guineos-----	Very limited ~slope (very limited) ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
Maricao-----	Very limited ~slope (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
Rock outcrop-----	Not rated	Not rated	Not rated	Not rated	Not rated
MaF2: Maraguez-----	Very limited ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~small stones (moderately limited) ~too sandy (slightly limited)	Very limited ~slope (very limited) ~cutbanks cave (slightly limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
McF: Maricao-----	Very limited ~slope (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
MmF: Matanzas-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~depth to bedrock (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited)	Very limited ~too clayey (very limited) ~depth to bedrock (limited) ~cutbanks cave (slightly limited)
Rock outcrop-----	Not rated	Not rated	Not rated	Not rated	Not rated
MnB: Matanzas-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~depth to bedrock (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited)	Very limited ~too clayey (very limited) ~depth to bedrock (limited) ~cutbanks cave (slightly limited)
MoC2: Moca-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (moderately limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
MoD2: Moca-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited) ~slope (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~slope (very limited) ~too acid (moderately limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
MoE2: Moca-----	Very limited ~low strength (very limited) ~slope (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (moderately limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
MpF2: Morado-----	Very limited ~slope (very limited) ~low strength (very limited) ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~depth to bedrock (very limited) ~too clayey (limited)	Very limited ~slope (very limited) ~soft bedrock <40" (moderately limited) ~cutbanks cave (slightly limited)
MuE: Mucara-----	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~shrink-swell (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited)	Very limited ~slope (very limited) ~soft bedrock <40" (limited) ~too clayey (moderately limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
MuF: Mucara-----	Very limited ~slope (very limited) ~depth to bedrock (very limited) ~shrink-swell (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited)	Very limited ~slope (very limited) ~soft bedrock <40" (limited) ~too clayey (moderately limited)
NaD: Naranjo-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~excess lime (very limited) ~too clayey (very limited) ~slope (limited)	Limited ~slope (limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)
NaE: Naranjo-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~excess lime (very limited) ~slope (very limited) ~too clayey (very limited)	Very limited ~slope (very limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)
NaF: Naranjo-----	Very limited ~slope (very limited) ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~excess lime (very limited) ~slope (very limited) ~too clayey (very limited)	Very limited ~slope (very limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)
Pa: Palmar-----	Limited ~wetness (limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Limited ~wetness (limited)	Very limited ~wetness (very limited) ~flooding (moderately limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
PeF: Pellejas-----	Very limited ~slope (very limited)	Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too sandy (very limited) ~slope (very limited) ~too acid (slightly limited)	Very limited ~slope (very limited) ~cutbanks cave (very limited) ~too clayey (slightly limited)
PhC2: Perchas-----	Very limited ~low strength (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (moderately limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited) ~wetness (slightly limited)
PhD2: Perchas-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~slope (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~slope (very limited) ~too acid (moderately limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
Ps: Pits-----	Not rated	Not rated	Not rated	Not rated	Not rated
Pt: Pits-----	Not rated	Not rated	Not rated	Not rated	Not rated
Re: Reilly-----	Not limited	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	Very limited ~small stones (very limited) ~area reclaim (very limited)	Very limited ~cutbanks cave (very limited) ~wetness (limited) ~flooding (moderately limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
RlC: Rio lajas-----	Not limited	Probable source ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too sandy (very limited)	Very limited ~cutbanks cave (very limited)
Rm: Riverwash-----	Not rated	Not rated	Not rated	Not rated	Not rated
Ro: Rock outcrop-----	Not rated	Not rated	Not rated	Not rated	Not rated
Rr: Rock outcrop-----	Not rated	Not rated	Not rated	Not rated	Not rated
RsF: Rock outcrop-----	Not rated	Not rated	Not rated	Not rated	Not rated
San german-----	Very limited ~depth to bedrock (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~excess lime (very limited) ~slope (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
RtF: Rock outcrop-----	Not rated	Not rated	Not rated	Not rated	Not rated
Tanama-----	Very limited ~shrink-swell (very limited) ~low strength (very limited) ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~slope (very limited)	Very limited ~hard bedrock <40" (very limited) ~too clayey (very limited) ~slope (very limited)
SaB: Sabana seca-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~wetness (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited) ~wetness (slightly limited)	Very limited ~too clayey (very limited) ~wetness (very limited) ~cutbanks cave (slightly limited)
SgD: San german-----	Very limited ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~excess lime (very limited) ~small stones (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (limited) ~cutbanks cave (slightly limited)
SgF: San german-----	Very limited ~depth to bedrock (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~excess lime (very limited) ~slope (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~cutbanks cave (slightly limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
SmF: San sebastian-----	Very limited ~shrink-swell (very limited) ~slope (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	Very limited ~excess lime (very limited) ~slope (very limited) ~small stones (very limited)	Very limited ~slope (very limited) ~cutbanks cave (very limited) ~too clayey (limited)
SnC: Santa clara-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~depth to bedrock (limited)	Very limited ~hard bedrock <40" (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
SNS: (soils not surveyed)-----	Very limited ~slope (very limited) ~low strength (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited)	Very limited ~slope (very limited)
SoC: Soller-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~slope (slightly limited)	Very limited ~hard bedrock <40" (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
SoD: Soller-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~slope (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~too clayey (limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
SoF: Soller-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~too clayey (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~too clayey (limited)
SpD: Soller-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~slope (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~too clayey (limited)
SpF: Soller-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~slope (very limited) ~too clayey (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~too clayey (limited)
SrF: Soller-----	Very limited ~low strength (very limited) ~depth to bedrock (very limited) ~shrink-swell (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~slope (very limited)	Very limited ~hard bedrock <40" (very limited) ~slope (very limited) ~too clayey (limited)
Rock outcrop-----	Not rated	Not rated	Not rated	Not rated	Not rated

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
TaB: Tanama-----	Very limited ~shrink-swell (very limited) ~low strength (very limited) ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~large stones (slightly limited)	Very limited ~hard bedrock <40" (very limited) ~too clayey (very limited) ~cutbanks cave (slightly limited)
TaC2: Tanama-----	Very limited ~shrink-swell (very limited) ~low strength (very limited) ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~large stones (slightly limited)	Very limited ~hard bedrock <40" (very limited) ~too clayey (very limited) ~cutbanks cave (slightly limited)
TaD2: Tanama-----	Very limited ~shrink-swell (very limited) ~low strength (very limited) ~depth to bedrock (very limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~depth to bedrock (very limited) ~too clayey (very limited) ~slope (very limited)	Very limited ~hard bedrock <40" (very limited) ~too clayey (very limited) ~slope (very limited)
Tb: Tiburones-----	Limited ~wetness (limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Limited ~wetness (limited)	Very limited ~wetness (very limited) ~flooding (moderately limited)
To: Toa-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited)	Moderately limited ~flooding (moderately limited) ~too clayey (moderately limited) ~cutbanks cave (slightly limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
TP: Tropopsamments-----	Not limited	Probable source	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too sandy (very limited) ~slope (slightly limited)	Very limited ~cutbanks cave (very limited) ~slope (slightly limited)
Ur: Urban land-----	Not rated	Not rated	Not rated	Not rated	Not rated
VaB: Vega alta-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Moderately limited ~too clayey (moderately limited) ~cutbanks cave (slightly limited)
VaC2: Vega alta-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~slope (slightly limited)	Moderately limited ~too clayey (moderately limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
VcB: Vega alta-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited)	Moderately limited ~too clayey (moderately limited) ~cutbanks cave (slightly limited)

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
VcC2: Vega alta-----	Very limited ~low strength (very limited) ~shrink-swell (moderately limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (slightly limited) ~slope (slightly limited)	Moderately limited ~too clayey (moderately limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)
VeB: Vega baja-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~wetness (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~wetness (slightly limited)	Very limited ~wetness (very limited) ~too clayey (limited) ~flooding (moderately limited)
Vg: Vigia-----	Very limited ~low strength (very limited) ~shrink-swell (very limited) ~wetness (limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~wetness (limited)	Very limited ~wetness (very limited) ~too clayey (limited) ~flooding (moderately limited)
Vm: Vivi-----	Not limited	Possible source ~excess fines (thickest layer) ~possible source (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too sandy (very limited) ~too acid (slightly limited)	Very limited ~cutbanks cave (very limited) ~flooding (moderately limited)
Voc2: Voladora-----	Very limited ~low strength (very limited) ~shrink-swell (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~too acid (limited) ~slope (slightly limited)	Limited ~too clayey (limited) ~cutbanks cave (slightly limited) ~slope (slightly limited)

Arecibo Area, Puerto Rico Northern Part: Detailed Soil Map Legend

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Construction Materials and Excavating--Continued

Map symbol and soil name	Source for roadfill	Source for sand	Source for gravel	Source for topsoil	Shallow excavations
	Limitation	Limitation	Limitation	Limitation	Limitation
VoD2: Voladora-----	Very limited ~low strength (very limited) ~slope (slightly limited) ~shrink-swell (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~too clayey (very limited) ~slope (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
VoE2: Voladora-----	Very limited ~low strength (very limited) ~slope (very limited) ~shrink-swell (slightly limited)	Very limited ~excess fines (thickest layer) ~excess fines (bottom layer)	Very limited ~excess fines (bottom layer) ~excess fines (thickest layer)	Very limited ~slope (very limited) ~too clayey (very limited) ~too acid (limited)	Very limited ~slope (very limited) ~too clayey (limited) ~cutbanks cave (slightly limited)
W: Water-----	Not rated	Not rated	Not rated	Not rated	Not rated